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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/791,136

03/02/2004

Jacky Seiller

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3182

23628

7590

02/22/2006

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EXAMINER

BRYANT, DELORIS S

ART UNIT

PAPER NUMBER

2813

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/791,136	SEILLER ET AL.	
	Examiner	Art Unit	
	Deloris Bryant	2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/2/04 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/08/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 6, #51 and #52, Fig. 7C, Fig. 7E and Fig. 8C. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

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informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "140, Fig. 8E" and "190, Fig. 8E" have both been used to designate an opening. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrari et al (US 2002/0011653) in view of Smoak (US 6,593,222). Ferrari discloses an integrated circuit comprising one or several metallization levels, metal conductive strips (Fig. 5; 21b) and metal contact pads (Fig. 5; 21a) being formed on a last metallization level (Fig. 5), the last level being covered with a passivation layer (Fig. 5; 25) in which are formed openings above the contact pads (pg. 2, para. 0020). Ferrari fails to disclose wherein the thickness of the pads, at least at a level of their portions not covered by the passivation layer, is smaller than the thickness of said conductive strips (claim 1) and that the contact pads are made of aluminum (claim 5). Smoak not only teaches a thin contact pad (Fig. 2-3; col. 3, lns 55-67; col. 4, lns 1-15) but also that the contact pad of made of aluminum (col. 3, line 57). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use the method of forming the contact pad of Smoak with Ferrari's teaching. One would have been motivated to so modify Ferrari to avoid Kirkendall voiding in the wire, a condition that the thin aluminum layer of the contact pad helps prevent.

Regarding claims 2-4, the prior art of Ferrari and Smoak teach the limitations of claim 1 as described above. Furthermore, Ferrari discloses wherein at least one conductive strip forms a coil (claim 2); wherein several of said conductive strips form a supply network (claim 3) (Fig. 5; 21b; pg. 2, para 0019) and wherein the last metallization level (Fig. 3; 21) is formed on an insulating layer (Fig. 5; 20), each contact

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pad (Fig. 5; 21a) being formed of a conductive layer (pg. 1-2, para. 0019) covering an insulating portion laid on the insulating layer (Fig. 3 and Fig. 5) (claim 4). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate Ferrari's method to have the advantage of reliability, controllability and repeatability, which are typical of these process (pg. 2, para 023).

Regarding claims 6-7, Ferrari discloses forming the last metallization level comprising: depositing a metal layer (Fig. 3; 21) on a substrate; etching the metal layer to form metal portions (Fig. 3; 21a) and said conductive strips (Fig. 3; 21b); covering the substrate, the conductive strips and the metal portions with a passivation layer (Fig. 5; 25); and removing the protection layer (pg. 2, para. 0020). Ferrari fails to disclose forming openings in the passivation layer above the metal portions and partially etching the metal portions to decrease their thickness to obtain the contact pads. Smoak teaches forming an opening in the passivation layer above the contact pad and partially etching the metal portions to decrease their thickness to obtain the contact pads (Fig. 2-3; col. 3, lns 55-67; col. 4, lns 1-15). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use the method of forming the contact pad of Smoak with Ferrari's teaching. One would have been motivated to so modify Ferrari to avoid Kirkendall voiding in the wire, a condition that the thin aluminum layer of the contact pad helps prevent.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deloris Bryant whose telephone number is (571) 272-8670. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dsb


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